

WHAT IS CLAIMED IS:

1. ~~A device for measuring light from a source in situ, the device comprising:~~
~~a photometer including a detector; and a collector for engaging with the~~
~~photometer such that light from the source is incident on the detector, the~~
~~collector including:~~
~~a hood for engaging the source such that ambient light is prevented from~~
~~entering the hood; and optics disposed within the hood for directing light from the~~
~~source onto the detector.~~ A device for measuring intensity of light from a plurality
of traffic signals, each of the traffic signals having a respective configuration and
including an LED array, the device measuring intensity without having the LED
array removed from the traffic signal being measured, the device comprising:
 - (a) a photometer including:
 - (i) a detector for generating a signal indicative of at least one
parameter of the light from the traffic signal;
 - (ii) circuitry for processing the signal from the detector;
 - (iii) an output for displaying a signal responsive to the processed
signal; and
 - (iv) a calibration circuit for selectively providing a plurality of calibration
signals each corresponding to a particular type of traffic signal; and
 - (b) a plurality of collectors, each being releasably engageable with the
photometer, each of the collectors including:
 - (i) a hood having a configuration for engaging with a respective one of
the traffic signals such that ambient light is prevented from entering

the hood and all of the light emitted by the LED array enters the hood; and

- (ii) optics disposed within the hood for directing light from the LED array of the traffic signal being measured onto the detector, the optics including: a translucent optical diffuser plate having a diffusion pattern disposed on one side of the plate, the optical diffuser plate being disposed within the hood such that light incident on the detector first passes through the optical diffuser plate; and a reflective layer disposed on an inside surface of the hood for reflecting light incident thereon.

2. ~~The measuring device of claim 1 wherein the optics include an optical diffuser disposed within the hood such that light incident on the detector first passes through the optical diffuser.~~ The device of claim 1, wherein the photometer further includes a display for displaying an indication of whether the intensity of the light from the traffic signal meets a threshold.

3. ~~The measuring device of claim 2 wherein the optical diffuser scatters the light from the source.~~ The device of claim 1, wherein the photometer further includes a display for displaying an indication of the intensity of the light of the traffic signal.

4. ~~The measuring device of claim 2 wherein the optical diffuser scatters the~~

~~light from the source.~~ The device of claim 1, wherein the photometer further includes a circuit for estimating when the intensity of the light from the source falls below a threshold.

5. ~~The measuring device of claim 2 wherein the optical diffuser is substantially planar.~~ The device of claim 1, wherein the particular type of traffic signal is characterized by parameters comprising color, size, and shape.

6. ~~The measuring device of claim 2 wherein the optical diffuser is curvilinear.~~ The device of claim 1, wherein the output is indicative of intensity of the light from the traffic signal.

7-43 [cancelled]